

MIL-C-17/166B
18 July 1985
SUPERSEDING
MIL-C-17/166A
4 June 1984

MILITARY SPECIFICATION SHEET

CABLE, RADIO FREQUENCY, FLEXIBLE, COAXIAL,
50 OHMS, M17/166-00001

THIS CABLE USES PVC MATERIAL AND IS NOT
TO BE USED IN AEROSPACE APPLICATIONS.

NOTE: THE AIR FORCE HAS RESTRICTED THE USE OF PVC IN
AEROSPACE AND GROUND SUPPORT APPLICATIONS. CABLES
WITH PVC JACKETING SHALL BE USED FOR RETROFIT PURPOSES
ONLY UNTIL AN ALTERNATE JACKET IS APPROVED.

This specification is approved for use by all Depart-
ments and Agencies of the Department of Defense.

The complete requirements for acquiring the cable described herein shall
consist of this specification and the latest issue of MIL-C-17.

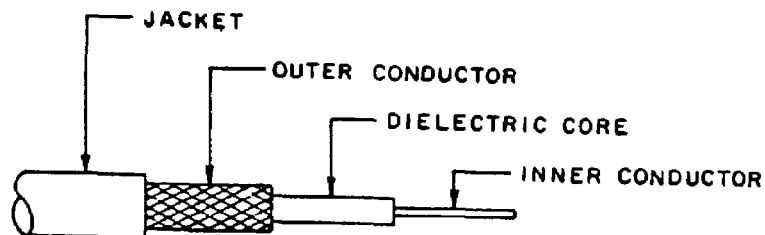


FIGURE 1. Configuration.

Ⓑ denotes changes.

FSC 6145

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

TABLE I. Description.

Component	Construction details																
Inner conductor	Solid bare copper wire. Overall diameter: .195 inch \pm .002.																
Dielectric core	Type A-1: Solid polyethylene. Diameter: .680 inch \pm .010.																
Outer conductor	Single braid of AWG No. 30 bare copper wire. Diameter: .760 inch, maximum. <div><div>Alternates</div><table><tr><td>Coverage</td><td>: 97.7% nominal</td><td>97.8% nominal</td><td>97.2% nominal</td></tr><tr><td>Carriers</td><td>: 24</td><td>36</td><td>48</td></tr><tr><td>Ends</td><td>: 14</td><td>9</td><td>7</td></tr><tr><td>Picks/inch:</td><td>3.1 \pm10%</td><td>4.0 \pm10%</td><td>5.6 \pm10%</td></tr></table></div>	Coverage	: 97.7% nominal	97.8% nominal	97.2% nominal	Carriers	: 24	36	48	Ends	: 14	9	7	Picks/inch:	3.1 \pm 10%	4.0 \pm 10%	5.6 \pm 10%
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Jacket	Type IIa: PVC. Diameter: .870 inch \pm .010.																

CAUTION IS DIRECTED TO THE APPLICATION OF THIS CABLE ABOVE 400 MHZ. ATTENUATION IS TESTED ONLY AT 400 MHZ. SRL AND POWER HANDLING CAPABILITIES ARE NOT STIPULATED HEREIN.

ENGINEERING INFORMATION:

Continuous working voltage: 8,000 V rms, maximum.

Velocity of propagation: 65.9 percent, nominal.

Operating temperature range: -40°C to +85°C.

Inner conductor properties:

DC resistance (maximum at 20°C): 0.0278 ohm per 100 feet.

(B) Elongation: 30 percent, minimum.

Tensile strength: Not applicable.

Engineering note: This cable is useful in general purpose, medium low temperature applications. (See connector series "N", "C", and "SC" per MIL-C-39012.)

REQUIREMENTS:

Dimensions, configuration, and description: See figure 1 and table I.

Environmental and mechanical:

Visual and mechanical:

Out-of-roundness: Not applicable.

Eccentricity: 5 percent, maximum.

Adhesion of conductors:

Inner conductor to core: 60 pounds, minimum; 600 pounds, maximum.

Aging stability: $+98^{\circ}\text{C} \pm 2^{\circ}\text{C}$.

Stress crack resistance: Not applicable.

Outer conductor integrity: Not applicable.

③ Cold bend: $-40^{\circ}\text{C} \pm 2^{\circ}\text{C}$.

Dimensional stability: $+85^{\circ}\text{C} \pm 2^{\circ}\text{C}$.

Inner conductor from core: 0.200 inch, maximum.

Inner conductor from jacket: 0.400 inch, maximum.

Contamination: Applicable.

Bendability: Not applicable.

Flammability: Not applicable.

⑧ Weight: 0.510 pound per foot, maximum.

Electrical:

Continuity: Applicable.

⑧ Spark test: 8,000 V rms, +10%, -0%.

⑧ Voltage withstanding: 22,000 V rms, +10%, -0%.

Insulation resistance: Not applicable.

Corona extinction voltage: 11,000 V rms, minimum.

Characteristic impedance: 50 ohms ± 2 .

Attenuation: 2.75 dB/100 ft maximum at 400 MHz.

Structural return loss: Not applicable.

Capacitance: 32.2 pF per foot, maximum.

Capacitance stability: Not applicable.

Capacitance unbalance: Not applicable.

Transmission unbalance: Not applicable.

Mechanically induced noise voltage: Not applicable.

Time delay: Not applicable.

Part number: See table II.

Supersession data: See table II.

TABLE II. Cross-reference of part number.

Part number	Superseded part number or type designation
M17/166-00001	RG-218/U per MIL-C-17D; RG-17A/U per MIL-C-17/10 (canceled)

Custodians:

Army - CR
Navy - EC
Air Force - 85

Preparing activity:

Army - CR

(Project 6145-0911-40)

Review activities:

Army - MI
Navy - SH, TD
Air Force - 11, 17, 99
DLA - ES, IS

User activities:

Army - AR, AT, ME
Navy - AS, MC, OS
Air Force - 19

Agent:

DLA - ES